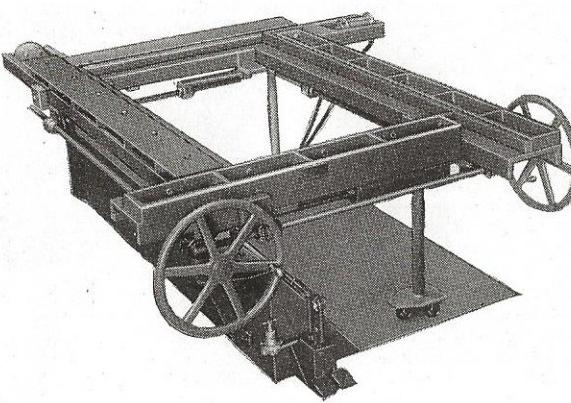


## High Speed Pneumatic Sash and Frame Clamp

A new Series 200 Sash and Frame Clamp, originally intended for high speed precision clamping of prefitted window sash, is adapted for many similar operations. It employs an ingenious overlapping jaw principle which adjusts to any square or rectangle within range of the machine and applies uniform pressure along the full length of all sides of the work.

Essentially it consists of four heavy steel and iron jaws arranged in the form of an overlapping square. Handwheels permit adjusting these jaws to the approximate size of the work to be clamped. As the jaws close from the fully open position,



the free end of each jaw moves past the semi-fixed end of the adjacent jaw so that they conform to the pattern of any square or rectangle within range of the machine. A differential adjustment is provided for extreme accuracy, and when adjusted to the required size, the jaws may be firmly locked.

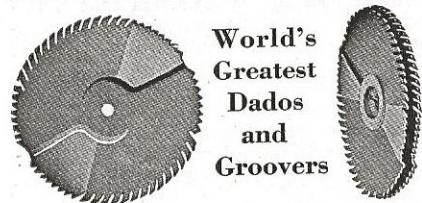
When the jaws are set to conform to the size and shape of the work, the stock may be placed in the clamp and is supported by the projecting portions of the jaws. Pressure is applied by two air cylinders shown in rear of clamp. These cylinders do not act directly against the work, but instead operate a cam mechanism which causes auxiliary jaws to close at one end and one side, securing the work firmly around the entire frame of the clamp.

Jaw movement is controlled by foot valve in front of the machine. A touch on one pedal causes clamp to close—a touch on the other releases it. The clamp may be handled by one operator, but maximum efficiency is attained with two men. It is reported that as high as 200 sash have been accurately assembled in one hour.

The clamp uses only two small air cylinders, usually 5" diameter by 3" stroke, as ordinarily arranged for sash. This makes for conservation of air.

## ALL SHAPES OF CUTS

World's  
Greatest  
Dados  
and  
Groovers



### Lamson Dado and Grooving Heads

The only regular groover that will cut notches out of rafters. Over 65,000 now in use. Both solid and adjustable. Single piece blades can't get out of order. Finer outside teeth act as spurs, larger teeth as cleaners. Head crosses cut twice in each revolution, leaving it smooth at sides and bottom. Heads are light and do not get out of balance, like the old style heads.

Quality circular and Band Saws. Best quality rubber bands for bands wheels. Lamson cement makes them stick on wood or iron.

*Write for circular and prices.*

**LAMSON CUTTER HEAD CO.**  
28 N. Jefferson St., Chicago, Ill.

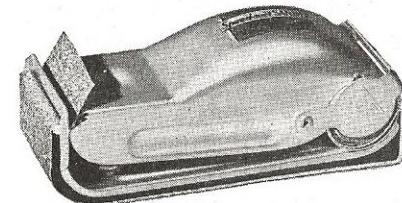
A steel bedplate is provided for the castered legs which support the moving jaws.

Full information is contained in a Bulletin No. 11-M, available from the manufacturers, The Black Brothers Co., Inc., P. O. Drawer 191, Mendota, Ill.

## Speed-Wet Hand Sander

A new hand sanding device has just been marketed by Behr-Manning, Troy, N. Y. It is a new type of sanding device which fits the hand ideally and may be used for dry sanding or with water, gasoline or oil. It holds a length of abrasive paper or cloth tightly in position over a replaceable Neoprene pad.

Named the "Speed-Wet Sander" it has a magazine in which a reserve supply of abrasive paper or cloth is rolled so that once it is loaded, the workman may continue sanding for a considerable period before it is neces-



sary to reload the block with an unused portion of abrasive material. When the sanding surface becomes unsuitable for further service, the workman may pause for a moment, unfasten a clamp and pull a new sanding surface into position, tearing off the worn end. This operation is repeated when necessary until all reserve sandpaper in the magazine is used. The unit is recommended for sanding flat or slightly curved surfaces.

## Wodack Electric Tool Catalog

Catalog 45 describes the extensive line of Wodack portable electric tools. These handy tools are offered in a wide variety of sizes and types for produc-

tion, maintenance, and many other types of work.

The catalog gives data on drills, a combination electric hammer and drill, Sanders, grinders, and other tools.

Address Wodack Electric Tool Corp., 4627 W. Huron St., Chicago, Ill.

## A Solenoid for Machine Tools

A solenoid designed primarily for machine tool use is announced by the John S. Barnes Corp., 301 S. Water St., Rockford, Ill. It is claimed that this solenoid is unharmed by oil or coolant. Feet and side plates are integral and made stronger. Plunger guides are made of phosphor bronze. Mechanical structures are said to be unusually rugged.

## Machine Shop Training Books Available at Cost

A series of monographs comprising suggested unit courses in various phases of machine shop practice has been prepared by the Bureau of Industrial and Technical Education of the University of the State of New York. Designed for beginners in machine shop practice, the texts are intended for use in vocational education programs for national defense industries and were prepared in cooperation with the U. S. Office of Education. The books are all of a practical nature and concern typical shop problems.

These texts, which are in loose leaf form with spiral wire binding, cover courses in heat treatment, lathe operations, drill press work, bench work, blueprint work, measurement, job sheets, electronics, and mathematics. The book on mathematics, the largest of the group, comprising 190 sheets, concerns itself with arithmetic applied to the machine shop and gives an unusually practical approach to the subject.

The booklets are being made available to industry at cost. Prices range from 45c. to \$1.15 for single copies, with lower unit prices where the texts are ordered in quantity. Price list may be obtained from the Greenwood Co., 49 Sheridan Ave., Albany, N. Y.